SHANON CASPERSON, PHD, DTR

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QUALIFICATIONS OVERVIEW

- Expertise in designing, implementing and managing complex human clinical research trials.
- Organized, take-charge professional with exceptional attention to detail and follow-through abilities.
- Tremendous problem solving skills and ability to bring people together to produce results.

EDUCATION

University of Texas Medical Branch, Galveston, Texas

Ph.D. in Cell Biology **2012**

Dissertation: "Skeletal Muscle Protein Metabolism and Molecular Responses to Endurance Exercise and Nutritional Interventions"

University of Houston, Houston, Texas

B.S. in Fitness and Human Performance **2004**

San Jacinto College, Houston, Texas

A.S. in Nutritional Sciences **2002**

RESEARCH EXPERIENCE

Grand Forks Human Nutrition research Center, Agricultural Research Services, United States Department of Agriculture, Grand Forks, North Dakota

Research Biologist **November 2014 – Present**

My primary research goals at the USDA focus upon elucidating how changes in the macronutrient composition of meals throughout the day affect energy metabolism.

- Clarifying protein intake requirements as it relates to achieving and maintaining a healthy body weight.
- To determine the ratio of macronutrient components that provides optimum health.
- Understanding how individual foods and food combinations provide a drug-like effect to help combat chronic diseases/conditions.

Postdoctoral Research Fellow **July 2012 – November 2014**

Research was focused upon the development of a biofeedback tool which utilizes changes in the ratio of ^{13}C to ^{12}C (^{13}C δ) in breath during weight loss.

University of Texas Medical Branch, Galveston, Texas

Graduate Assistant **August 2006 – May 2012**

Research Associate **November 2004 – August 2006**

Research was focused on understanding how exercise and nutritional interventions both independently and synergistically contribute to overall health.

COMMUNITY

Member of the University of North Dakota IRB (07/14 – present). Conducted educational seminars on a variety of nutritional topics and taught an 8-week healthy eating class (Get Real: Weight Management) at the YMCA. Volunteered as the strength and conditioning coach for the Clear Lake Special Olympics Power Lifting team.

AWARDS AND HONORS

Gail E. Butterfield Nutrition Travel Award (First awardee of the newly founded award)	2011
Peyton and Lydia Schapper Endowed Scholarship	2010, 2007
Energy and Macronutrient Metabolism Research Interest Section ASN	2010, 2009
Isotec Student Sponsorship at Experimental Biology	2008, 2007
Environmental & Exercise Physiology Section Predoctoral Gatorade Award	2007
Texas Chapter American College of Sports Medicine Student Research Manuscript Award	2005

PROFESSIONAL MEMBERSHIPS

American Society for Nutrition	2007
American Physiology Society	2007
National Postdoctoral Association	2013
Obesity Society	2014

APPENDIX A

PUBLICATIONS

Published Articles in Peer-Reviewed Journals (16 total: 13 published, 1 in review, 2 in revision or prep):

Casperson, S.L., Reineke, J.E., Sieling, J., Moon, J., Roemmich, J. and Whigham, L. A Mobile Phone Food Record App to Digitally Capture Dietary Intake for Adolescents in a Free-Living Environment: Usability Study. *JMIR Mhealth Uhealth*. 2015 Mar 13;3(1):e30.

Mamerow, M.M., Mettler, J.A., English, K.L., **Casperson, S.L.**, Arentson-Lantz, E., Sheffield-Moore, M., Layman, D.K., and Paddon-Jones, D. Dietary protein distribution positively influences 24h muscle protein synthesis. *J Nutr.* 2014 Jun;144(6):876-80.

Butz, D., **Casperson, S.L.**, and Whigham, L. The emerging role of carbon isotope ratio determination in health research and medical diagnostics. *J. Anal. At. Spectrom.,* 2014, April;29(4):594-598.

Sheffield-Moore, M., Wiktorowicz, J.E., Soman, K.V., Danesi, C.P., Kinsky, M.P., Dillon, E.L., Randolph, K.M., **Casperson, S.L.**, Gore, D.C., Horstman, A.M., Lynch, J.P., Doucet, B.M., Mettler, .J, Ryder, J.W., Ploutz-Snyder, L.L., Hsu, J.W., Jahoor, F., Jennings, K., and Durham, W.J. Sildenafil increases muscle protein synthesis and reduces muscle fatigue. *Clin Transl Sci,.* 2013 Dec;6(6):463-8.

Sheffield-Moore, M., Dillon, E.L., Randolph. K.M., **Casperson, S.L.**, White, G.R, Jennings, K., Rathmacher, J., Schuette, S., Janghorbani, M., Urban, R.J., Hoang, V., Willis, M., and Durham, W.J. Isotopic decay of urinary or plasma 3-methylhistidine as a potential biomarker of pathologic skeletal muscle loss. *J Cachexia Sarcopenia Muscle,* 2014 Mar;5(1):19-25.

Dillon E.L., Basra G., Horstman A.M., **Casperson S.L.**, Randolph K.M., Durham W.J., Urban R.J., Diaz-Arrastia C., Levine L., Hatch S.S., Willis M., Richardson G., and Sheffield-Moore M. Cancer Cachexia and Anabolic Interventions: A Case Report. *J Cachexia Sarcopenia Muscle,* 2012 Dec;3(4):253-63.

Casperson, S.L., Sheffield-Moore, M., Hewlings, S.J. and Paddon-Jones, D. Leucine supplementation chronically improves the anabolic response to meals in older adults consuming the RDA for protein. *Clinical Nutrition*, 2012 Aug;31(4):512-9.

Dillon, E.L., **Casperson, S.L.**, Durham, W.J., Randolph, K.M., Sanford, A.P., Kinsky, M.P. and Sheffield-Moore, M. Muscle Protein Metabolism Responds Similarly to Exogenous Amino Acids in Healthy Younger and Older Adults during NO-Induced Hyperemia. *Am J Physiol Regul Integr Comp Physiol*, 2011 Nov;301(5):R1408-17.

*****Sheffield-Moore, M., *Dillon, E.L., **Casperson, S.L.**, Gilkison, C., Grady, J.J., Paddon-Jones, D., and Urban, R.J. A Randomized Pilot Study of Monthly Cycled Testosterone Replacement or Continuous Testosterone Replacement vs. Placebo in older Men. *****Co-First Authors**,** *J. Clin. Endocrinol. Metab*, 2011 Nov;96(11):E1831-7.

*Durham, W.J., ****Casperson, S.L.**, Dillon, E.L., Keske, M.A., Paddon-Jones, D., Sanford, A.P., Lakshman, K.M., Hickner, R.C. Hong, C., Grady, J.J. and Sheffield-Moore, M. Age-related anabolic resistance after endurance type exercise in humans. ***Co-First Authors,** *FASEB J.* 2010 Oct; 24(10):4117-27.

*Dillon, E.L., *****Sheffield-Moore, M., Paddon-Jones, D., Gilkison, C., Sanford, A.P., **Casperson, S.L.**, Jiang, J., Chinkes, D.L. and Urban, R.J. Amino acid supplementation increases lean body mass, basal muscle protein synthesis and IGF-I expression in older women. *J. Clin. Endocrinol. Metab.* 2009 May;94(5):1630-7.

Dillon, E.L., Janghorbani, M., Angel, J.A., **Casperson, S.L.**, Grady, J.J., Urban, R.J., Volpi, E. and Sheffield-Moore, M. Novel noninvasive breath test method for screening individuals at risk for diabetes. *Diabetes Care*, 2009 Mar;32(3):430-5.

Dillon E.L., Volpi E., Wolfe R.R., Sinha S., Sanford A.P., Arrastia C.D., Urban R.J., **Casperson S.L.**, Paddon-Jones D., and Sheffield-Moore M. Amino acid metabolism and inflammatory burden in ovarian cancer patients undergoing intense oncological therapy. *Clin Nutr.* 2007 Dec;26(6):736-43.

Sheffield-Moore M., Paddon-Jones D., **Casperson S.L.**, Gilkison C., Volpi E., Wolf S.E., Jiang J., Rosenblatt J.I., Urban R.J. Androgen therapy induces muscle protein anabolism in older women. *J Clin Endocrinol Metab.* 2006 Oct;91(10):3844-9.

Casperson, S.L., Durham, W.J., Dillon, E.L., Paddon-Jones, D., Hickner, R.C. and Sheffield-Moore, M. Minor role for skeletal muscle in amino acid trafficking changes during exercise. In revision, 2014.

Casperson, S.L., Shoeller, D.A., Johnson, L.K., and Whigham, L. Calculating the δ13C of meals using the δ13C and caloric contribution of the meal constituents – implications for 13CO2 tests. In prep, 2014.

Casperson, S.L., Durham, W.J., and Sheffield-Moore, M. Skeletal muscle hypertrophy- and atrophy-related intracellular signaling in response to amino acids and endurance-type exercise in healthy adults. In prep, 2013.

BOOK CHAPTERS

Sheffield-Moore, M., **Casperson, S.**, and Urban, R.J. Androgens and lean body mass in the aging male. In Textbook of Men's Health, B. Lunenfeld and L. Gooren, Parthenon Publishing, New York, NY, 2007

CONFERENCE PRESENTATION AND POSTERS

Calculation of total meal $\delta^{13}C$ from individual food $\delta^{13}C$.
Experimental Biology Annual Meeting 2014

Usability of mobile phone food records to assess dietary intake in adolescents.
Oral presentation at the Experimental Biology Annual Meeting 2013

Metabolic Responses to Amino Acids Before and During Aerobic Exercise in Older and Younger Men.
American College of Sports Medicine Annual Meeting 2011

Anabolic and energetic signaling in human skeletal muscle in response to amino acids and endurance exercise.
Experimental Biology Annual Meeting 2010

Nutrient sensing anabolic pathway is increased in the elderly following chronic dietary leucine supplementation.
Oral presentation at the Experimental Biology Annual Meeting 2010

Leucine supplemented meals chronically improve muscle protein synthesis in older adults.
Experimental Biology Annual Meeting 2009

Peripheral vasodilation and aerobic exercise equally affect skeletal muscle substrate utilization in older and younger adults.
Experimental Biology Annual Meeting 2009

Cyclic testosterone administration improves muscle anabolism in hypogonadal men.
The Endocrine Society Annual Meeting 2008

Pharmacologic vasodilation increases muscle perfusion and muscle protein anabolism similarly in elderly and young.
Experimental Biology Annual Meeting 2008

Exercise-stimulated blood flow in older and younger men: a methodological comparison.
Oral presentation at the Experimental Biology Annual Meeting 2007

Exercise-mediated increases in muscle perfusion in older men: interaction of amino acids and muscle protein metabolism.
Experimental Biology Annual Meeting 2007

A methodological comparison of nitric oxide-stimulated leg blood flow in healthy elderly.
Workshop on Investigation of Human Muscle Function *in Vivo* 2005

Free Weight Power Testing with Muscle Lab.
Student Research manuscript Award Recipient
Oral presentation at the American College of Sports Medicine - Texas Chapter Annual Meeting 2005

APPENDIX B

JOURNAL ACTIVITIES

Peer review for:

- Journal of Medical Internet Research
- Journal of Gerontology: Medical Sciences